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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,404	03/04/2002	Henry Esmond Butterworth	ARC920010105US1	4855

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EXAMINER
LIN, KELVIN Y

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/090,404	BUTTERWORTH ET AL.
	Examiner	Art Unit	
	Kelvin Lin	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2005*.

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Detailed Action

Reopening of Prosecution After Appeal Brief or Reply Brief

In view of the appeal brief filed on 12/23/05, PROSECUTION IS HEREBY

REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the

following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed

by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and

appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth

in 37 CFR 41.20 have been increased since they were previously paid, then appellant

must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by

signing below:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claim 1 is rejected under 35 U.S.C 102(b) as being anticipated by Le Boudec et al., (U.S. Patent No. 6016306).

2.   Regarding claim 1, Le Boudec teaches a computer system, comprising: at least two nodes, each node including logic for undertaking method acts comprising (Le Boudec, col.1, l.6-10, in which the switched-based computer network consists at least source and destination nodes perform the topology function (logic for undertaking logic), see col.5, l.27-28, fig.1b):

- determining a system topography (Le Boudec, col.1, l.8-9, to determine the path from source node to destination nodes, and col.5, 27-28, fig. 1b,includes the topology function corresponds to system topography);

- determining an optimum membership based on the topography (Le Boudec, col.4, l.57-67, col.5, l.1-6, in which the widest-path metric and the shortest path (optimum membership) method corresponds to determining an optimum membership based on the topography), the determining act at each node converging with the determining act on all other nodes with each node arriving at the same optimum membership as the other nodes but independently of the other nodes (Le Boudec, col.4, l.60-63, for the result of minmax function, which

applied to all node in the link to determine the bottleneck-type link is a

converging function because the result of function minmax is a finite

set of solution, moreover, the result for each node in the link will arrive

at the same optimum membership, e.g. D1452, and D1892).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1.   Claims 2-32 are rejected under 35 U.S.C 103(a) as being unpatentable over Le

Boudec et al., (U.S. Patent No. 6016306) in view of Trovato et al., (US PG Pub No.

2003/0069981).

2.   Regarding claim 2, although Le Boudec teaches the computer system with at

least two nodes and determine a system topography, also teach the determination of an

optimum membership based on the topography, it lacks the teaching the same seed

being the same for each node.

However, Trovato teaches the system of claim 1, comprising more than two

nodes, the determining act being based on a seed, the seed being the same for each

node such that each node uses the same seed as every other node in determining the

optimum membership, such that the optimum membership arrived at by each node is

the same membership arrived at by every other node (Trovato, page 3, [0026], given

the same seed, the pseudo-random number will generate the same sequence number,

therefore, the server only deal with the sequence number of clients and it will arrive the

same membership by every other node).

It would have been obvious to one ordinary skilled in the art at the time of

invention by incorporating Trovato's same seed value to generate same sequence

number with Le Boudec's bottleneck-type link search for the next node in the network.

The motivation would be that the combination of Trovato with Le Boudec's

structure to search for the next node of the link (path). Because Le Boudec's routing

information can be modified to add same seed value for next node search processing

such as IP address that will save substantially time and resource because of the

encoding of a seed value. (Trovato, page 3, [0026]).

3.   Regarding claim 3, Le Boudec further discloses the system of claim 1, wherein

the act of determining an optimum membership is undertaken using a randomize

simulated annealing technique (Le Boudec, col.8, l.40-54, the line of codes present the

processing of annealing techhique, iteratively check to determine the result is optimized

).

4.   Regarding claim 4, Le Boudec further discloses the system of claim 1, wherein

each node includes a link state module undertaking the act of determining a topology

and an optimization module undertaking the act of determining an optimum

membership, the link state module sending the topology to the optimization module (Le

Boudec, col.2, l. 40-46, col.5, l.7-11, to improve a network node topology function).

5.   Regarding claim 5, Le Boudec further discloses the system of claim 4, wherein

the link state module at each node communicates with at least one link state

module at another node in the system (Le Boudec, col.5, l.12-36).

6.   Regarding claim 6, Le Boudec further discloses the system of claim 4, wherein

the link state module communicates with a database of links and nodes (Le Boudec,

col.2, l.19-24, col.8, l.16-20).

7.   Regarding claim 7, Le Boudec further discloses the system of claim 6, wherein

elements in the database is periodically refreshed (Le Boudec, Fig.3, col.5, l.31-37)

8.   Regarding claim 8, Le Boudec further discloses the system of claim 4, wherein

each node includes an event manager receiving the optimum membership from

the optimization module, the optimum membership being used by the event manager

during system operations (Le Boudec, col.5, l.25-35, fig. 1b, in which the bandwidth

information update module 11 is worked as event manager to update the bandwidth to

be sent out and received incoming bandwidth information)

9.   Regarding claim 9, Le Boudec further discloses the system of claim 4, , wherein

the method acts undertaken by the optimization module further include:

- iteratively determining plural solutions; determining which solution is

    a most desirable solution; returning the most desirable solution if it is

    fully connected; otherwise returning a next most desirable solution if

    the next most desirable solution is fully connected (Le Boudec, col.8,

I.5-54, the line of codes presents the path checking, determining and returning the optimized result).

10.   Regarding claims 10-17 have similar limitations as claims 1, and 3-9. Therefore, claims 10-17 are rejected for the same reasons set forth in the rejection of claims 1, and 3-9.

11.   Regarding claims 18-24 have similar limitations as claims 1-5, and 8-9. Therefore, claims 18-24 are rejected for the same reasons set forth in the rejection of claims 1-5, and 8-9.

12.   Regarding claims 25-32 have similar limitations as claims 1-5, and 8-9. Therefore, claims 25-32 are rejected for the same reasons set forth in the rejection of claims 1-5, and 8-9.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Lin whose telephone number is 571-272-3898. The examiner can normally be reached on Flexible 4/9/5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached on 571-272-3896. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

3/13/06
KYL

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER